


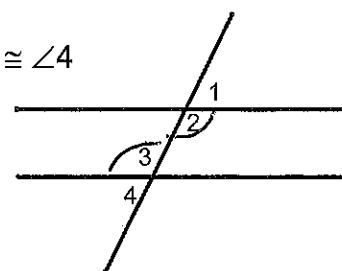
Name \_\_\_\_\_


Date \_\_\_\_\_

## 202 Chapter 2 Proofs—Extra Practice

Complete the following proofs. Also complete, p. 114 #47; p. 120 #58; p. 121 #17 (2-columns); p. 758 2-7 #10; p. 758 2-8 #s 4-9.


1. Statements	Reasons
① 	① Given
② $\angle 1 + \angle 2$ are suppl. $\angle 3 + \angle 4$ are suppl.	② Suppl. thm
③ $\angle 1 \cong \angle 4$	③ Suppl. of $\cong$ $\angle$ s are $\cong$

Given:  $m\angle 2 = m\angle 3$ Prove:  $\angle 1 \cong \angle 4$ 

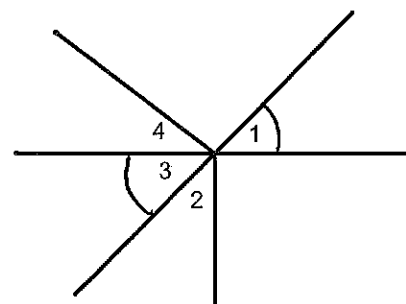
2. Statements	Reasons
① 	① Given
② $AB = BC$ $BC = CD$	② Def of Midpt
③ $AB = CD$	③ Transitive

Given: B is the midpoint of  $\overline{AC}$   
C is the midpoint of  $\overline{BD}$

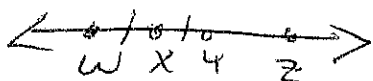
Prove:  $AB = CD$ 

3. Statements	Reasons
① 	① Given
② $\angle 1 \cong \angle 3$	② Vert. $\angle$ s are $\cong$
③ $\angle 2 \cong \angle 4$	③ Compl. of $\cong$ $\angle$ s are $\cong$

Given:  $\angle 1$  and  $\angle 4$  are complementary  
 $\angle 2$  and  $\angle 3$  are complementary

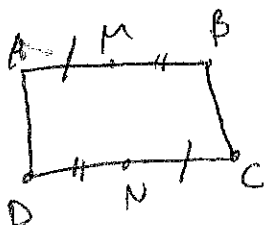
Prove:  $\angle 2 \cong \angle 4$ 

47.



S	R
① X is midpt WY	① Given
② $WX = XY$	② Def of Midpt
③ $XY + YZ = XZ$	③ Segm +
④ $WX + YZ = XZ$	④ Subst

17.



1. $AM = CN$ $MB = ND$	1. Given
2. $AM + MB = AB$ $DN + NC = CD$	2. Seg + Post
3. $MB + AM = CD$	3. Subst
4. $AB = CD$	4. Subst.

4. S

5. N

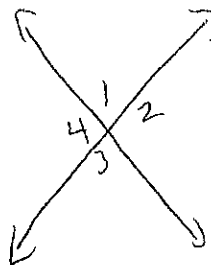
6. S

7. A

8. A

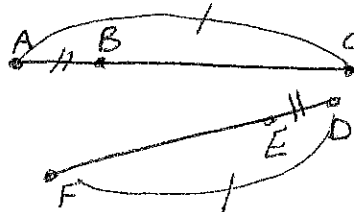
9. S

58.



a	
a. $\angle 1 + \angle 2$ for LP	a. Given
b. $\angle 1 + \angle 2$ are suppl	b. Suppl. Thm
c. $m\angle 1 + m\angle 2 = 180$	c. Def of suppl.
d. $m\angle 2 = 2m\angle 1$	d. Given
e. $m\angle 1 + 2m\angle 1 = 180$	e. Subst
f. $3m\angle 1 = 180$	f. Subst
g. $\frac{3(m\angle 1)}{3} = \frac{180}{3}$	g. Div
h. $m\angle 1 = 60$	h. Subst

10.



① $AC = DF$ ; $AB = DE$	① G.
② $AC = AB + BC$ $DF = DE + EF$	② Seg + Post
③ $AB + BC = DE + EF$	③ Subst
④ $BC = EF$	④ Subst.